

ENERGY POLICY UPDATE

February 17, 2015

The Energy Policy Update Electronic Newsletter is published by the Arizona Governor's Office Of Energy Policy and is provided free of charge to the public. It contains verbatim excerpts from international, domestic energy, and environment-related publications that are reviewed by Community Outreach Personnel. For inquiries, call 602-771-1143 or toll free to 800-352-5499. To register to receive this newsletter electronically or to unsubscribe, email Gloria Castro.

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UPCOMING WEBINARS

NEW! Western Governors'
Drought Forum Webinar Series:
Feb. 25, Mar. 11, Mar. 25, & Apr. 8

— Click here for more information or to register.

ENERGY STAR Webinars

U.S. Dept. of Energy Tribal Renewable Energy Webinar Series

U.S. Dept. of Energy Webinars

February 18: LIVE WEBCAST ON THE GEOGRAPHY OF Like our Facebook page! Learn more about energy in Arizona, get daily posts on a variety of energy topics and use the Comment Section to tell us what you think or ask questions of our energy experts.

The Arizona Republic now has limited access. As such, links may or may not work.

ARIZONA-RELATED

Arizona's Economy Poised To Warm Up in 2015, Reports Say

[Az Republic, Feb. 16] Arizona's economy, which grew in line with the nation last year, could perk up with a faster pace of expansion in 2015, according to new forecasts. Robert Kavcic, senior economist at BMO Capital Markets, sees Arizona's economy advancing 3.5 percent in 2015, beating expected U.S. growth of 3.1 percent. Both the state and the nation grew at around 2.5 percent last year, BMO estimates, with final numbers still not in. "The ongoing housing-market recovery, sturdy population growth and exposure to a wide range of high-tech manufacturing should help improve a labor market that still faces some areas of weakness," the report, issued Feb. 13, said of Arizona. BMO sees statewide housing starts rising from about 26,000 in 2014 to 35,000 both this year and next. Economists at Wells Fargo Securities, in a late-January report, noted signs of economic momentum for Arizona. Job gains have been broad-based, the federal sector is growing again in Arizona and more people are moving to the state, economists Mark Vitner and Michael Wolf wrote.

ASU Students Help Guide Future of Public Transportation in Phoenix

[ASU News, Feb. 11] The future of public transportation in the greater Phoenix area could undergo some changes in the near future, and a group of Arizona State University graduate students appreciate the opportunity to assist. The Phoenix Public Transit Department established a 35-member citizen committee to examine how to pay for public transportation and get public input. The department asked David Swindell, director of the Center for Urban Innovation in ASU's College of Public Service and Community Solutions, to assist in creating a public survey to help collect data on how Valley residents feel about various public transit issues. "The community faces the sunset of the sales tax that currently supports operations and maintenance of the light rail and bus systems in five years," says Swindell. Swindell decided to not only undertake the project, but to also integrate graduate students from his PAF 502 Public Service Research II statistics class as part of their course study.

DOE, Arizona Utilities Announce Transmission Infrastructure Project Energization

[ELP, Feb. 13] The Department of Energy's Western Area Power Administration (Western) and a group of Arizona utilities celebrated the energizing of a new transmission infrastructure project that will serve the state's growing electrical energy needs, attract renewable energy development to the area, and strengthen the transmission system in the Southwestern U.S. The 109-mile Electrical District No. 5-to-Palo Verde Hub (ED5-PVH) transmission project in Arizona advances America's energy infrastructure by eliminating system constraints and providing increased capacity access to affordable energy in the region. "This newly energized transmission line bolsters the reliability and resiliency of the power grid while improving opportunities for new renewable energy generation in Arizona," said Deputy Secretary of Energy Elizabeth Sherwood-Randall. "With America's domestic energy boom, increasing energy transmission capacity is vital to continued energy development and to expanding access to affordable energy produced here in America." ED5-PVH starts at the Palo Verde market hub near Wintersburg in Maricopa County, Arizona, and runs southeast to the ED5 Substation in Pinal County, Arizona. The Palo Verde market hub is a crucial energy juncture in the western U.S. that serves communities in Arizona, California, and Nevada. ED5-PVH adds up to 410 MW of bi-directional capacity to the electric grid — enough capacity

ALTERNATIVE FUELS

Attend webcast. (No advance registration required. During the call, dial 888-807-9760 & use audio participant passcode 4990436. Log in to the website & use conference number PW1383510 & participant passcode 4990436.)

February 18: NATIONAL DEVELOPMENT SITING CONSIDERATIONS

Webinar Sponsor: WINDExchange Click here to register.

Feb. 23: MOVING TOWARDS SUSTAINABILITY WEBINAR Webinar Sponsor: U.S. EPA Click here to register.

March 3: ENERGY EFFICIENCY IN THE FRANCHISE: BEST PRACTICES FROM BETTER BUILDINGS FRANCHISORS Click here to register.

2015 UPCOMING EVENTS

Sustainability Solutions Festival Feb. 16-21

GreenBiz Forum 2015 Feb. 17-19 Phoenix, AZ

VerdeXchange Arizona 2015 Feb. 18-20 Phoenix, AZ

RES Las Vegas Mar. 9-12 Las Vegas, NV

Natural Gas Vehicles + Infrastructure Mar. 10-11 Phoenix, AZ

GLOBALCON Conference &

Mar. 17-18 Philadelphia, PA

Balance-Unbalance Int'l. Conference; Water, Climate, Place: Reimagining Environments Mar. 27-29 Tempe, AZ

Arizona Science & Engineering

Apr. 7-9 Phoenix, AZ

Tribal Economic Outlook Conference

Apr. 9 Flagstaff, AZ

Solar Summit 2015 Apr. 14-15 Phoenix, AZ to power 30,000 homes. That includes 254 MW to the market hub and 156 MW to 18 local Arizona communities, including water conservation and irrigation districts, public power districts and Native American tribes. The project, completed on time and about \$3 million under budget, was a joint effort between Western and the Southwest Public Power Resources Group, a collection of public power companies that include several Western firm electric and transmission service customers.

Fort Huachuca Christens Huge Solar Farm

[Az Daily Star, Feb. 12] Fort Huachuca has dedicated one of the largest solar-energy farms in the U.S. military, a 68-acre, 17.2 megawatt photovoltaic array owned and operated by Tucson Electric Power. Completed in December and dedicated on Wednesday, the array produces enough power to satisfy one-quarter of the Army post's energy needs, equivalent to the annual electric usage of about 3,000 homes. The system will offset approximately 58,000 tons of carbon dioxide per year while reducing other emissions, TEP said.

Nevada Leads in Growth, Ariz. 3rd in Solar Jobs

[Az Republic, Feb. 13] The number of solar industry jobs in Nevada more than doubled last year, the fastest per capita growth in the nation, a nonprofit research and education group said in a new report Thursday. Arizona, meanwhile, added 612 solar jobs in 2014 for a growth rate of 7.2 percent. The state is estimated to have 9,170 solar jobs, The Solar Foundation said in releasing its fifth annual State Solar Jobs Census. Arizona ranks No. 3 among the states in total solar jobs and No. 2 as a percentage of total employment. California became the first state to surpass 50,000 solar jobs with a U.S.-leading 54,680 in 2014, the report said. It estimates that as of November 2014, the solar industry employed 173,807 workers nationally — up nearly 22 percent from the same month the previous year. It reported positive job growth in the industry during that period in 27 states and the District of Columbia. Nevada has added 3,500 solar jobs since November 2013, an increase of 146 percent. That puts Nevada seventh on the list overall with 5,900 jobs, and No. 1 in jobs per capita.

SRP Considers Minor Changes to Proposed Solar Rate Hike

[Az Republic, Feb. 12] Salt River Project officials will consider options to the utility's proposed rate hike on existing solar customers before taking a final vote Feb. 26, but have little issue with proposed fees on new solar users. SRP in December proposed a rate hike that will add about \$50 to the monthly bills of customers who have added solar since Dec. 8. The proposal also calls for the approximately 15,000 SRP customers who already have solar to be "grandfathered," or keep their current rate structure for a decade, then shift to the new rates, and to implement the higher rates if their home is sold. SRP managers present such proposals to an elected board of directors who make the final vote. Those directors on Thursday seemed comfortable with the overall rate hike, but not with the way it will affect existing solar customers. "I have concerns and feel we should look seriously at the grandfathering provisions," said board member Deborah Hendrickson, who represents the Chandler area. She and other directors asked for an additional meeting before they vote Feb. 26, and for managers to present alternatives to the 10-year grandfathering provision. No date was set for such a meeting, which must be noticed according to state open meeting requirements. The directors did not ask the managers to develop alternatives to the \$50 in additional fees that will be charged to new solar customers under the plan, or to the 3.9 percent rate hike being considered that will add about \$5 a month to the average residential customer's bill. That could signal an affirmative vote on those matters later this month.

Two Arizona Dairies Produce Methane Power

[Az Republic, Feb. 13] Thousands of cows at the Triple G Dairy in Buckeye lazily chew their grains and hay, unknowingly providing renewable energy every time they contribute to the farm's manure lagoon. "As long as the cows are pooping, we are producing power," Curt Kaminer, director/manager of Chaple Street Environmental, said as he gazed at the cows that were contentedly eating under a massive shade structure. On the Triple G and Stotz dairies, two neighboring Buckeye farms, a combined 20,000 head of cattle produce more than milk. Their manure also produces methane, a greenhouse gas that Kaminer's company has turned into a profitable cow byproduct. The company has built systems at each farm that capture the methane and convert it into power, which goes back onto the Arizona Public Service Co. energy grid, he said. In addition to producing energy, the systems reduce the odor from manure lagoons. They also separate and cleans the water, which is used for irrigation, and creates fertilizer-grade manure, which is spread onto feed crops. "What has happened here is really pretty cool," said Chaple Street's attorney, Donald Gilbert of Fennemore Craig in

Utility Solar Conference Apr. 27-29 San Diego, CA

CXENERGY 2015 Conference & Expo

Apr. 27-30 Las Vegas, NV

Alternative Clean Transportation (ACT) Expo

May 4-7 Dallas, TX

NARUC Utility Rate School - Western

May 11-15 San Diego, CA

Solar Power Generation Mexico May 19-20 World Trade Center, Mexico

Better Buildings Summit May 27-29 Washington, DC

Energy Efficiency Finance Forum

May 31-Jun. 2 San Francisco, CA

Industrial Energy Tech. Conference 2015 Jun. 2-5 New Orleans, LA

33rd West Coast Energy Mgmt.

Jun. 3-4 Long Beach, CA

14th Annual Small Business Forum & Expo Jun. 16-18 Phoenix, AZ

ASHRAE Annual Conference Jun. 27-Jul.1 Atlanta, GA

ACEEE Summer Study on Energy Efficiency in Industry Aug. 4-6 Buffalo, NY

Energy Efficiency Exchange: Federal Training & Knowledge Aug. 11-13 Phoenix, AZ

Solar Power Int'l. 2015 Sep. 14-17 Anaheim, CA

ACEEE National Conference on Energy Efficiency as a Resource Sep. 20-22 Little Rock, AR

World Energy Engineering Congress (WEEC) Sep. 30-Oct. 2 2015 Orlando,

Greenbuild Int'l. Conference & Expo

Nov. 18-20 Washington, DC

Renewable Energy World Conference & Expo Dec. 8-10 Las Vegas, NV Phoenix. The process converts methane to energy, which the company sells to APS. The company earns energy credits, which it also sells, company consultant Mons Ellingson said. The company burns some of the methane, rendering it harmless. For this, it earns carbon credits that it sells mostly to California companies, Ellingson said. The profits are shared with the farms, which provide the manure and the space for the methane digesters, he said.

ALTERNATIVE ENERGY & EFFICIENCY

Burlington First U.S. City Run by 100 Percent Renewable Energy

[Fierce Energy, Feb. 9] Burlington, Vermont is producing as much renewable energy as it uses annually, reports NPR, including solar, wind and hydro. Not too shabby for a city populated by 42,000 people. The electric utility, Burlington Electric Department, claims they are the only city in the United States to have transitioned to 100 percent renewable energy and expect to save at least \$20 million over the next 20 years because of it. According to Ken Nolan, manager of power resources for Burlington Electric, most of the city's energy is produced through hydropower, which uses underground turbines to generate the electricity. Another 30 percent comes from a biomass facility and the remaining 20 percent comes from wind.

Cost of Wind Energy in Michigan Declines by Half: Report

[North American WindPower, Feb. 16] Since 2008, the cost of Michigan wind energy has been cut in half, according to a report issued by the Michigan Public Service Commission. According to the report, data from recent power purchase agreements reveal that the cost of wind energy was in the range of \$47/MWh to \$53/MWh - or nearly half the cost of coal. Further, the report finds, there has been significant investment in the renewable energy sector since 2008, with more than \$2.9 billion invested in the state. The report goes on to inform that Michigan is on track to meet its 10% by 2015 renewable energy standard. However, there is no mandate in place after this year.

EPA Finance Center Targets Water Infrastructure Improvements and Resiliency

[NASEO website, Feb. 11] Through its recently launched Water Infrastructure and Resiliency Finance Center, the U.S. Environmental Protection Agency aims to help communities across the country improve their wastewater treatment, drinking water supply and stormwater conveyance systems. The Center will a) explore innovative financial tools, public-private partnerships, and non-traditional finance concepts to better leverage federal funding programs; b) build on the successful State Revolving Fund and other programs of EPA and its federal partners; and, c) target ways to increase financing of climate-resilient water infrastructure projects that integrate water efficiency, energy efficiency, water reuse and green infrastructure.

Government Uses Performance Contracting for Lighting Control

[Energy Manager Today, Feb. 16] The federal government is increasingly incorporating advanced lighting control systems in its energy savings performance contracts (ESPCs) as part of its effort to reduce energy use in federal facilities, reports the Federal Times. Lighting consumes a big chunk of the total electricity used in a commercial building – nearly 38 percent. Lighting control can result in energy savings up to 60 percent, and a total cost savings of more than 20 percent, when incorporated within the scope of an energy retrofit. In addition to traditional energy-saving measures like occupancy sensors that deliver immediate, short-term results, ESPCs may include advanced strategies, such as daylight harvesting, that maximize energy efficiency and control over time. According to the General Services Administration (GSA), daylight harvesting, combined with automatic dimming control, has the potential to contribute significant energy savings throughout its portfolio. ESPCs don't have to include the installation of energy-saving LED lighting fixtures if they are cost prohibitive. Instead, the contract can include lighting control strategies that allow for the immediate use of fluorescent fixtures but have the capability to use LED fixtures in the future.

SEIA: Solar Energy Now Cheaper Than Conventional Power

[ELP, Feb. 12] Millions of Americans can now spend less money on solar power than what they currently spend for conventional electricity. The cost of installing solar panels has drastically been reduced over the past few years and has finally become less expensive than fossil fuel energy, according to the Solar Energy Industries Association. The largest residential solar installation companies have done extremely well of late. According to the SEIA — "Through Q3, a new solar project has been installed every 3 minutes in 2014". Unfortunately, many of these Americans are drastically overpaying for their solar power. Homeowners typically sign up for 20 year leases where they end up paying many thousands more than they need to. The

ASU Sustainability Series Events

Green Building Lecture Series Scottsdale, AZ

cost per installed watt for solar power is now around \$3. This means that the average sized, 5,000-watt system would cost \$15,000. On the other hand, the solar leasing companies have their customers typically paying \$150 or more per month for 20 years. This equates to at least \$36,000 over the term of the contract.

Utilities Increasingly Adopting Smart Street Lighting Programs

[Smart Grid News, Feb. 10] Silver Spring Networks, Inc.'s announcement to expand their networked street light deployments is just the latest in a trend of utilities who are piloting smart street lighting programs. Silver Spring is partnering with Florida Power & Light (FPL), Baltimore Gas & Electric (BG&E), ComEd, and Pepco Holdings Inc. (PHI) on the networked street light and smart city technology projects. "Networked street lights have great potential to benefit our customers," said Manny Miranda, vice president of power delivery for Florida Power & Light. "As we expand our program to nearly 500,000 lights, Silver Spring's technology enables FPL to help improve the reliability and efficiency of our street light network while also supporting the on-going performance of our smart grid." Only a week ago, Silver Spring announced their partnership with Commonwealth Edison (ComEd), and other municipalities are taking notice. Last year, Los Angeles began replacing 140,000 of their older street lights with the smart grid technology, and San Francisco is preparing to replace 18,500 older street lights with LEDs -an \$11 million project to connect their lights to the grid. According to a 2014 study by Navigant, light-emitting diode (LED) prices have been falling, causing the demand for the newer technology to rise. The result is an adoption of the networked street lights for many cities. Further, prices are expected to continue to drop in the long term. A study by ABI Research expects the installed base of smart street lights to reach 40 million by 2019.

ENERGY/GENERAL

Fannie Mae Gives Discount to Green Apartment Buildings

[SustainableBusiness.com News, Feb. 13] For the first time, mortgages will be discounted for green buildings, which advocates have been pursuing for years. Fannie Mae announced that green multifamily properties will get a 10 basis point discount on interest for refinancing, acquisition and supplemental mortgage loans. To qualify, buildings can be LEED-certified, Energy Star-certified or meet Enterprise's Green Communities Criteria. Fannie Mae is the top provider of multifamily financing in the US with a portfolio valued at more than \$200 billion. 20 million families live in rental apartments and condos in the US. If the market interest rate is 4% for multifamily loans, for example, certified buildings would pay 3.9%, saving \$95,000 in interest payments over 10 years on a \$10 million dollar loan. "This is a great demonstration of leadership from Fannie Mae, and the partnership between the multifamily finance industry and the green building industry," says Rick Fedrizzi, CEO and founding chair of the US Green Building Council. "This is real money and an incentive to not only build green but also for existing buildings to achieve certification. For the first time, Fannie Mae multifamily lenders will be able to reward building owners for their better buildings."

Green Button Alliance Launched

[Energy Manager Today, Feb. 9] The Green Button Alliance (GBA) has been formed to advance the Green Button initiative and will facilitate standards-based application development, administer certification and testing programs and create awareness among consumers to accelerate adoption of the Green Button standard. Founding members of the Green Button Alliance include London Hydro, Schneider Electric, UL, the Department of Energy (DOE), National Institute of Standards and Technology (NIST), and the UCA International Users Group. Building upon existing Green Button initiatives, the Green Button Alliance will unite industry thought leaders in order to more-rapidly deliver the benefits of standardized Green Button technologies to consumers. The White House-inspired Green Button initiative was created in 2011 with the support of NIST, DOE and the Smart Grid Interoperability Panel (SGIP). The Green Button Alliance is committed to providing customers with easy, standardized access to their energy information, which will ultimately enable them to identify ways to better manage their utility consumption to save money and resources. Today, about 60 million energy customers with smart meters have access to their own energy data in a standardized format.

Oil Hits \$62, Nears 2015 High

[The Hill, Feb. 17] Oil rose to \$62 a barrel on Tuesday, nearing its 2015 high. The price jump came amid threats to Middle East supplies, and concerns of a slow down in the U.S., Reuters reports. Egypt bombed the Islamic State targets in Libya and Iraq's partially autonomous

Kurdistan Regional Government threatened to stop oil exports. "The oil price is finding additional support from renewed greater perception of the risks to supply," Carsten Fritsch, an analyst at Commerzbank told Reuters. "In the short term, the momentum suggests that prices will climb further."

INDUSTRIES AND TECHNOLOGIES

EPRI Unveils Open-Source Demand Response Software

[T-D World.com, Feb. 11] The Electric Power Research Institute has unveiled demand response software that would provide a common way for devices and appliances on the electric grid to respond automatically to changes in price, weather, and demand for power, a process called automated demand response (ADR). ADR makes it possible to translate changes in wholesale markets to corresponding changes in retail rates. It helps system operators reduce the operating costs of demand response (DR) programs while increasing its resource reliability. For customers, ADR can reduce the cost of electricity by eliminating the resources and effort required to achieve successful results from DR programs. The EPRI ADR software was certified by the OpenADR Alliance, an organization of stakeholders that fosters the development, adoption, and compliance of the Open Automated Demand Response (OpenADR) standard through collaboration, education, training, testing, and certification. "Release of this software is a critical step in developing open, interoperable standards that will facilitate the emerging integrated grid," said Mark McGranaghan, vice president of Power Delivery and Utilization at EPRI. "Making this software freely available to the industry will accelerate the adoption of standards-based demand response." The EPRI integrated grid concept envisions a robust electricity grid that effectively integrates distributed energy resources - ranging from rooftop solar to demand response.

It Takes an Average 63 Days to Interconnect a Solar System

[Energy Manager Today, Feb. 12] Delays are common during the process to interconnect solar installations to the grid, according to the Energy Department's National Renewable Energy Laboratory (NREL), which has analyzed data from more than 30,000 solar PV installations. According to the new NREL report, "Understanding Processes and Timelines for Distributed Photovoltaic Interconnection in the United States," which examined PV project data across 87 utility territories and 16 states, for residential and small commercial systems (less than 50 kilowatts), it took an average of 63 total business days (median 53) from the date a PV installer submits an interconnection application to when the utility grants permission to operate.

More Electric Car Charging Points in Japan than Gas Stations

[Business Recorder, Feb. 17] TOKYO – Green-car sceptics take note: Japan now has more electric vehicle charging spots than gas stations. The country's number-two automaker Nissan says there are now 40,000 charging units -- including those inside private homes -- across the nation, compared with 34,000 petrol stations. While gas stations have multiple pumps and can service many more cars, the figures underscore efforts to boost green-vehicle infrastructure in Japan, long a leader in a sector that remains tiny globally. Nissan is betting on growing demand for electric cars, while rival Toyota said it has been swamped by orders for its first mass market hydrogen fuel-cell car, the Mirai sedan.

The Distributed Energy Storage Industry Described in One Chart

[GreenBiz.com, Feb. 11] Battery-based energy storage can play a valuable enabling role in renewable energy adoption, but storage also can do much more. Services such as peak shifting, backup power and ancillary grid services are a small subset of the larger matrix of potential future values that batteries can provide, but storage is still too expensive to costeffectively provide these services in most U.S. markets. However, energy storage may be reaching a tipping point. For example, analysts at GTM project that 318 MW of distributed solar plus storage may be installed by 2018. Also, California's mandate to procure 1.3 GW of storage, combined with the Tesla Gigafactory and the general trend of moving towards prosumer-based electricity markets, is a testament to the size of the potential market. Thanks to these projections and no shortage of media coverage (by our count, over 40 energy storage articles have been released over the past two months alone), an outsider could be led to believe that distributed storage, by participating in several kinds of electricity markets using a number of product configurations, is capable of solving many of our electricity system ills. However, we're not quite there yet. In reality the current state of the industry in the U.S. is still simple enough that it can be captured in a single chart that illustrates the two major challenges the energy storage industry is facing: high costs and limited avenues for capturing value.

LEGISLATION AND REGULATION

Measure to Correct the LNG Tax Inequity Introduced in U.S. Senate

[NGV Forum, Feb. 10] This week, Senators Michael Bennet (D-CO) and Richard Burr (R-NC) introduced legislation (S. 344) to create a level playing field for LNG to compete with diesel as a transportation fuel on our nation's highways. The federal highway excise tax on both diesel and LNG is set at 24.3 cents per gallon. However, it takes about 1.7 gallons of LNG to equal the same energy content as one gallon of diesel. As a result, LNG is taxed at a rate 70 percent higher than diesel on an energy equivalent basis. This disparity creates a significant disincentive for the use of LNG. The introduced legislation would correct this disparity by taxing LNG on an energy equivalency, rather than volumetric basis.

SunZia Receives Key Federal Permit To Build Transmission Project

[T-D World.com, Feb. 12] The SunZia Southwest Transmission Project received a "Record of Decision" (ROD) from the U.S. Bureau of Land Management (BLM) for its proposed transmission project covering 515 mi between New Mexico and Arizona. The ROD concludes the federal permitting effort, which officially began in May 2009, under the National Environmental Policy Act (NEPA). "We are excited to reach this milestone and to be one major step closer to unleashing the renewable energy potential of the southwest and creating jobs" said Tom Wray, SunZia Project Manager. "Reaching an agreement with the U.S. Department of Defense to take measures to preserve and protect the current and future missions of the White Sands Missile Range was the final hurdle in this process and a huge accomplishment in itself. And none of this would have been possible without the exhaustive and thorough environmental review and analysis conducted by BLM." Development efforts will now turn toward seeking state and local siting approvals in New Mexico and Arizona.

US Clean Energy Incubator Network Launches

[SustainableBusiness.com News, Feb. 11] The Obama administration is focused on scaling renewable energy right now, calling on impact investors to put \$2 billion into promising technologies, and also launching a national incubator network as a pipeline for those funds. Funded with \$3 million from DOE, the Clean Energy Incubator Network will provide nationwide coordination among clean energy business incubators. The goal is to identify and implement best practices that give early-stage companies the best chance for success. Acting as a hub, the network will bring startups and industry together, help incubators learn from each other, and advance technologies emerging from universities and federal labs. DOE's National Renewable Energy Lab and the Electric Power Research Institute (EPRI) are administering the program. This week's ARPA-E Energy Innovation Summit is the first event and the Clean Energy Investment Summit planned for this spring will bring the marketplace together: startups, incubators, clean energy investors, and industry participants.

Washington State Debates Law To Wean Off Coal Power

[Associated Press, Feb. 16] SEATTLE — Lawmakers hoping to wean Washington State off coal power are trying to ease the way for the state's utilities to end the electricity it gets from coal. Bills in the House and Senate set up certain favorable conditions for three private utilities, should they decide in the future to shut down a massive coal-fired power plant in eastern Montana that provides power to a chunk of the Pacific Northwest. Supporters say the proposal gives the utilities the tools they need to begin divesting from coal power plants, including a way for the utility to issue bonds for shutdown and other costs that would be paid back by ratepayers over time. But the Sierra Club and other critics say the proposal removes too much utility oversight, sets too long a timeline for closing a power plant and doesn't ensure that coal power gets replaced by something cleaner.

WESTERN POWER

Apple Building Big Solar Energy Project in California

[Associated Press, Feb. 10] SAN FRANCISCO — Apple will spend nearly \$850 million on a solar energy project that will generate enough power for the computer giant's new corporate headquarters, retail stores and other operations in California. The tech company will be the biggest single consumer of energy from the new solar facility. It is being constructed on 2,900 acres in rural Monterey County, south of the San Francisco Bay Area where Apple is headquartered. The project reflects Apple's concern about climate change, CEO Tim Cook said at an investment conference Tuesday in San Francisco. He added that the company's

computer centers already are powered by various forms of renewable energy. Arizona based First Solar Inc. is building the facility, which will have a capacity of 280 megawatts. Apple has signed a 25year contract for electricity from 130 megawatts of the plant's capacity. Cook said that will be enough to power the new headquarters Apple is building in Cupertino, California, along with all of its other offices in the state, as well as Apple's 52 California retail stores and a computer center. First Solar said it will sell the remaining electricity to Pacific Gas & Electric, the chief utility for Northern California.

Bosch Equips Net Zero Community with Geothermal, Hot Water Solutions

[NASEO website, Feb. 11] Bosch has partnered with Taurus Investment Holdings, a Boston-based real estate development company, to equip a new 7,500 home master-planned net zero community outside Austin, Texas, with geothermal heat pumps, hot water systems, and Energy Star appliances. The new community, called Whisper Valley, will eventually include some 7,500 net zero ready single and multi-family homes and apartments, plus 2+ million square feet of retail and office space across 2,062 acres. All structures will be geothermal and solar equipped, capable of achieving the net zero energy, or carbon neutral, standard adopted by the city of Austin's municipal building code for all new construction homes. The project is said to be one of the 10 biggest developments of its kind in the United States.

California Formally Opens Large Solar Plant

[Associated Press Sun, Feb. 9] Riverside, CA – One of the nation's largest solar projects was dedicated Monday in the Riverside County desert, as California rushes to expand its use of green power to meet the state's renewable energy requirements. The dedication of the Desert Sunlight Solar Farm comes about a month after Gov. Jerry Brown called on the state to increase renewable electricity use to 50 percent by 2030, up from the current goal of 33 percent by 2020. "Solar projects like Desert Sunlight are helping create American jobs, develop domestic renewable energy and cut carbon pollution," Interior Secretary Sally Jewell said in a statement. "I applaud the project proponents for their vision and entrepreneurial spirit to build this solar project, and commend Gov. Brown for implementing policies that take action on climate change and help move our nation toward a renewable energy future." The plant, which uses photovoltaic panels, is expected to produce enough power for about 160,000 homes. Constructed on about 4,000 acres of federal land, it is owned by NextEra Energy Resources, GE Energy Financial Services and Sumitomo Corporation of Americas. First Solar is building and operating the plant, the California Energy Commission said. Nationwide, the U.S. Bureau of Land Management has approved 52 large renewable energy projects since 2009, including 29 solar plants.

PG&E Proposes Largest Deployment of EV Charging Stations in the United States

[Energy Manager Today, Feb. 9] Pacific Gas & Electric (PG&E) went before state regulators on Monday, Feb, 9, asking for permission to implement what would become the largest deployment of electric vehicle (EV) charging stations in the United States. The company's plan would bring around 25,000 EV chargers to commercial and public locations across Northern and Central California. According to the company, the sites would include multi-family dwellings, retail centers, and workplaces. PG&E also plans to provide tools and education to the site hosts.

SolarCity Launches Solar Service in Reno Area, Deepens Region's Tesla Ties

[Reno-Gazette-Journal, Feb. 17] Things are heating up in the Reno area as the nation's largest provider of solar power officially announced its arrival in Northern Nevada. SolarCity launched its service in Reno, Sparks and Carson City on Tuesday, allowing customers to start placing orders for solar panel installations. The company's entry into the area further expands its footprint in the Silver State. Nevada became the 15th state served by SolarCity after it launched in the Las Vegas area in May of last year. The reception from Las Vegas so far "has been extremely good," said SolarCity spokesman Jonathan Bass. "Nevada is a great market for solar," Bass said. "Obviously it has strong sun exposure but there's also a lot of interest from homeowners and our products have been well received." That product includes a unique twist on the solar panel installation formula. Although SolarCity still gives customers the traditional option to pay for the entire system — which can cost anywhere from \$7,000 to \$30,000 — it also has a pay-as-you-go option without the large upfront cost of a typical installation agreement. Introduced in 2008, the pay-as-you-go option now accounts for the bulk of SolarCity's business. The option works by letting customers pay a monthly fee based on the power their system produces over time.

ARIZONA STATE INCENTIVES/POLICIES

ARIZONA COMMERCE AUTHORITY (ACA)

INCENTIVES

Arizona has lowered taxes, streamlined regulations, and established a suite of incentives to support corporate growth and expansion. The Arizona Competitiveness Package, groundbreaking legislation adopted in 2011, makes it easier for existing Arizona companies to prosper and establishes Arizona as one of the most desirable places for expanding companies to do business. Give your company a competitive edge by utilizing Arizona's incentives.

- Job Training
- Quality Jobs
- Qualified Facility
- Computer Data Center Program
- Research & Development
- Foreign Trade Zone
- Military Reuse Zone
- Angel Investment
- Renewable Energy Tax Incentive
- Healthy Forest

- Sales Tax Exemption for Machinery and Equipment
- Lease Excise
- Additional Depreciation
- Work Opportunity
- Commercial/Industrial Solar
- SBIR/STTR
- Private Activity Bonds
- QECB's

- (ACA) PROGRAMS
- DATABASE OF STATE INCENTIVES FOR RENEWABLES & EFFICIENCY (DSIRE)
- Arizona Incentives/Policies
- Federal Incentives/Policies
- Solar Policy News

DSIRE provides summaries of current solar policy developments and an archive of past solar policy developments. Current solar news appears below the news archive, which is searchable by several criteria.

GRANTS

Students – Geothermal Resources Council (GRC) – The GRC presents news and information for students in the global geothermal community. There are some great opportunities for student scholarships in geothermal. For more information, visit the link below. You will find "Scholarships" half way down the page.

Website: http://www.geothermal.org/students.html The following solicitations are now available: (Click on title to view solicitation)

- National Institute of Food and Agriculture Tribal Colleges Research Grant (USDA-NIFA-TCRGP-004795) Applications due 2/20/2015
- DE-FOA-0001201: Fiscal Year (FY) 2015 Vehicles Technologies Program Wide Funding Opportunity Announcement – Concept Paper Submission Deadline: 2/26/2015 8:00 PM ET, Full Application Submission Deadline: 4/10/2015 8:00 PM ET
- DE-FOA-0001261: OPEN 2015 Submission Deadlines: Notice of Intent Deadline: 2/20/2015 5:00 PM ET, Concept Paper Submission Deadline: 2/27/2015 5:00 PM ET, Full Application Submission Deadline: TBD
- Thermal Transport Processed (PD-14-1406) Application due 2/20/2015 and 10/20/2015
- Student Program for Environmental Excellence in Design (SPEED) (EPA-OAR-OTAQ-15-02) Application Due Date: 2/22/2015

- U.S. Department of Agriculture Phase II (USDA-NIFA-SBIR-004815) Applications due 2/26/2015
- The Resilient Electricity Delivery Infrastructure (REDI) Initiative (DE-FOA-0001219)
 Application Due Date: 3/04/2014
- EPA-EE-14-02 Environmental Education Local Grants Program Close Date: 3/06/2015
- Physics of Reliability: Evaluating Design Insights for Component Technologies in Solar 2 (PREDICTS2) – Close Date: 3/12/2015
- Sustainable and Holistic Integration of Energy Storage and Solar PV (SHINES) Close Date: 3/19/2015
- NEW! Solar Powering America by Recognizing Communities (SPARC)
 Funding Number: DE-FOA-0001241 Concept Paper Submission Deadline:
 3/5/2015 5:00 PM ET; Full Application Submission Deadline:4/27/2015 5:00 PM ET;
 Webinar Information: Date: February 18, 2015 Time: 4:00pm Eastern
 Register here: https://attendee.gotowebinar.com/register/3005409845756656642
- Desalination and Water Purification Research and Development (DWPR) (R15AS00019) – Application Due Date: 4/27/2015
- Desalination and Water Purification Research and Development (DWPR) Pilot (R15AS00021) – Application Due Date: 4/27/2015
- American Apprenticeship Initiative (FOA-ETA-15-02) Application Due Date: 4/30/2015
- Flexible Hybrid Electronics Manufacturing Innovation Institute Grant (BAA-RQKM-2015-0014) – Applications due 5/29/2015
- Advanced Frontiers in Renewable Hydrogen Fuel Production via Solar Water Splitting Technologies – Letter of Intent due 10/7/2015
- Land and Water Conservation Fund State and Local Assistance Program Application Due Date: 08/11/2015
- Landscape Design for Sustainable Bioenergy Systems (DE-FOA-0001179) Concept Paper due 11/21/2015
- Repowering Assistance Program Ongoing
- Rural Business Enterprise Grants Ongoing
- Rural Business Opportunity Grants Ongoing
- Sunshot Catalyst Prize (DE-FOA-0001126) Applications Accepted on a
 Continuous Basis The U.S. Department of Energy SunShot Catalyst is an open
 innovation program that allows the public to rapidly create and develop products and
 solutions that address near-term challenges in the U.S. solar marketplace through prize
 challenges.
- Sustainable Agriculture Research and Education Grants Ongoing
- Renewable Energy RFP's Solicitations for Renewable Energy Generation, Renewable Energy Certificates, and Green Power – Various Deadlines
- U.S. Dept. of Agriculture Rural Development Grant Assistance
- Green Refinance Plus Ongoing
- National Science Foundation Funding Opportunities